Haynes & Whiteley

FIG.1.

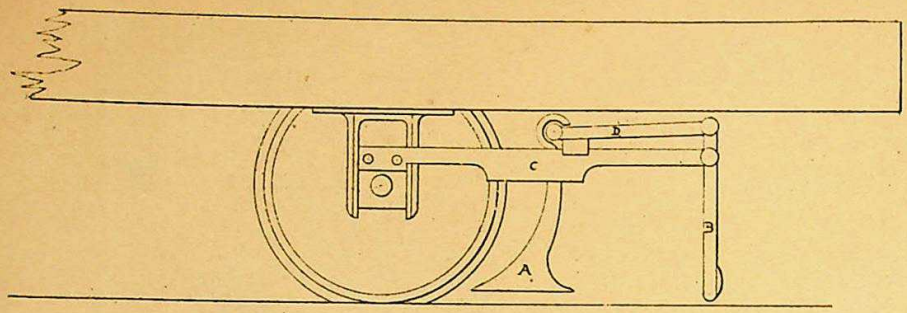


FIG.2.

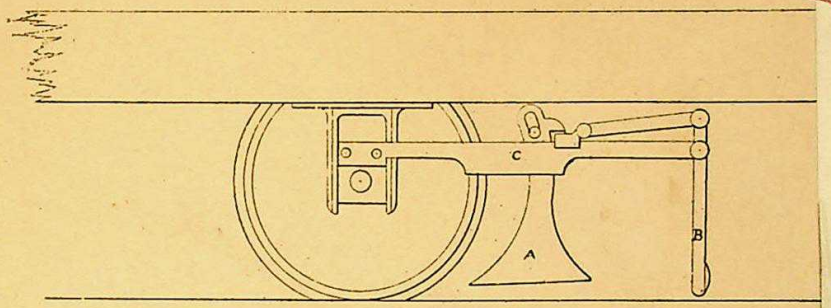


FIG.3.

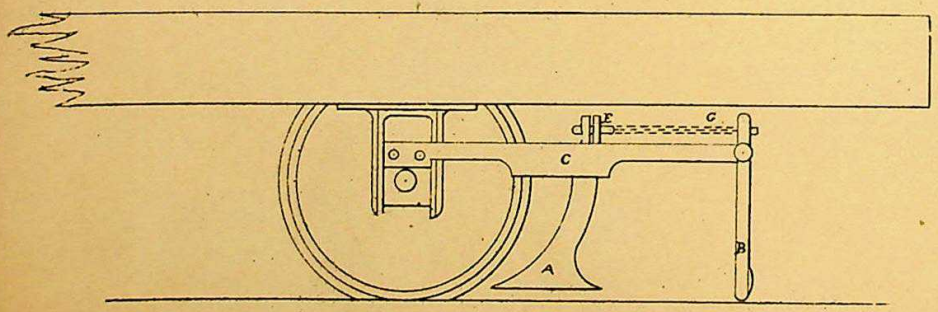
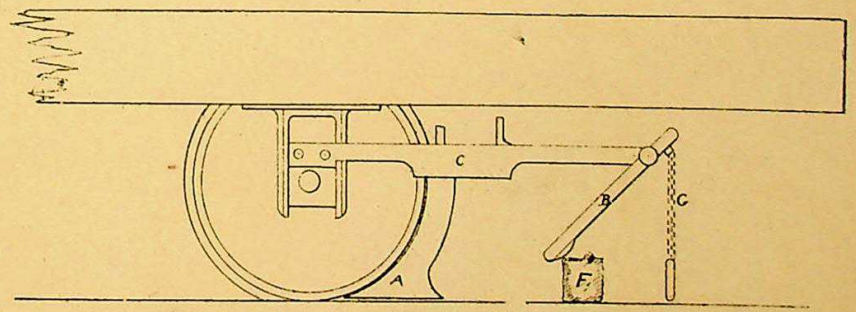


FIG.4.



1884 / 1

ENGLISH / 03 of 1884

VEHICLE FENDERS.

A.D. 1884, 1st JANUARY. N° 103.

An Improved Attachment to Tramcars, Locomotives, and Vehicles, for the Removal of Obstructions, also Applicable as a Brake.

PROVISIONAL SPECIFICATION.

JAMES WILLIAM HAYNES and WILLIAM WHIELDON of Number 42 Devonshire Chambers, Bishopsgate Street without in the City of London Engineers do hereby declare the nature of our invention for IMPROVED ATTACHMENTS TO TRAMCARS LOCOMOTIVES AND VEHICLES FOR THE REMOVAL OF OBSTRUCTIONS ALSO APPLICABLE AS A BRAKE to be as follows:—

We construct and fix to the framework, axle or axleboxes of the vehicle in advance of and in a line with the wheels a rod which we call the "Guard" so fixed or suspended vertically by means of a pin or hinge or flexible spring freely to move backward or towards the wheel when acted upon, the lower end approaching nearly unto the road or rail.—Between the "Guard" and the wheel we place a block or catcher suspended or held to the framework of the vehicle by a bolt through a hole in the block, or it may be by a fixed bolt or bolts through one or more slots in the block, the same being connected to the "Guard" by means of a chain, rope, wheels levers or cranks or any combined in such manner that upon the "guard" being displaced from its vertical position it will cause the bolt to be withdrawn or the levers or other alternative appliances to act thus releasing the block or catcher which immediately falls in front of the wheel and onto the road or rail and effectually intercepts from the wheel the object or obstruction on the road or rail which caused the "guard" to move—The "guard" and block or catcher may be of iron, wood or other suitable material in one or more parts.

The block or catcher may be of a concave form on one side to act as a break upon the wheel and the bottom may be flat to brake upon the road or rail The other or front side may be wedge shaped or concave or simply square or splayed,—in the wedge or concave shape that it may slide underneath the obstruction and *carry* it forward & in the square or splayed shape that it should push the obstruction forward or out of and away from the line of the wheels.

Dated this first day of January 1884.

JAMES WILLIAM HAYNES.
WILLIAM WHIELDON.

[*Price* 6*d*.]

COMPLETE SPECIFICATION.

We JAMES WILLIAM HAYNES and WILLIAM WHIELDON of 42 Devonshire Chambers, Bishopsgate St[t] in the City of London Engineers do hereby declare the nature of our Invention for AN IMPROVED ATTACHMENT TO TRAMCARS LOCOMOTIVES AND VEHICLES FOR THE REMOVAL OF OBSTRUCTIONS, ALSO APPLICABLE AS A BRAKE and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

We construct and fix to the framework axle or axlebox of the vehicle in advance of and in a line with the wheels a rod which we call "the Guard" so fixed or suspended vertically by means of a pin or hinge or flexible spring freely to move backward or towards the wheel when acted upon the lower end approaching nearly unto the road or rail.

Between the "Guard" and the wheel we place a block or "catcher" suspended or held to the framework of the vehicle by a bolt through a hole in the block, or it may be by a fixed bolt or bolts through one or more slots in the block the same being connected to the "guard" by means of a chain, rope wheels levers or cranks or any combined in such manner that upon the guard being displaced from its vertical position it will cause the bolt to be withdrawn or the lever or other alternative appliance to act thus releasing the Block or catcher which immediately falls in front of the wheel and on to the road or rail and effectually intercepts from the wheel the object or obstruction on the road or rail which caused the "guard" to move.

The "guard" and Block or catcher may be of Iron wood or other suitable material in one or more parts.

The Block or catcher may be of a concave form on one side to act as a brake upon the wheel, and the bottom may be flat to brake upon the road or rail—the other or front side may be wedge shaped or concave or simply square or splayed.

In the wedge or concave shape that it may slide underneath the obstruction and *carry* it forward—or in the square or splayed shape that it should push the obstruction forward or out of and away from the line of the wheels.

The chief features of our invention are shewn on the accompanying drawings:—

Figs—1. 2. 3. 4 represent a leading wheel of a tramcar or other vehicle A is the block or "catcher" retained in position on the bar C (which is attached to the axle box,) by the slide rod D which slide rod is acted upon by the "Guard" B when the same guard is deflected from its perpendicular position which deflection *must* occur upon the "guard" passing any obstruction on the line of wheels.

Fig 2 is a modification of the same arrangement.

Fig 3 shews the block of "catcher" held in position by a simple bolt E through lugs on the same and on the bar C and connected by a chain G with the guard B.

Fig 4 shews the same block or catcher released the guard having passed against the obstruction F.

Having now particularly described and ascertained the nature of our said Invention and in what manner the same is to be performed we declare that what we claim is:—

1. The suspended rod or lever called the "Guard" placed in advance of the block or "catcher" in front of the wheel, which upon being deflected from its normal perpendicular position, acts directly or indirectly to release the fastenings

or holdings of the said block or "catcher" which consequently falls on to the road or rail in front of the wheel.

2. The attachment to the Axle or Axle box of the vehicle the bar or support which carries the "Guard."

3 The several arrangements for the interception and removal of obstructions and prevention of bodily injury in cases of accident substantially as hereinbefore described and shewn on the Drawings herewith.

Dated this 30th day of September 1884.

JAMES WILLIAM HAYNES.
WILLIAM WHIELDON.

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For Her Majesty's Stationery Office.

1884.